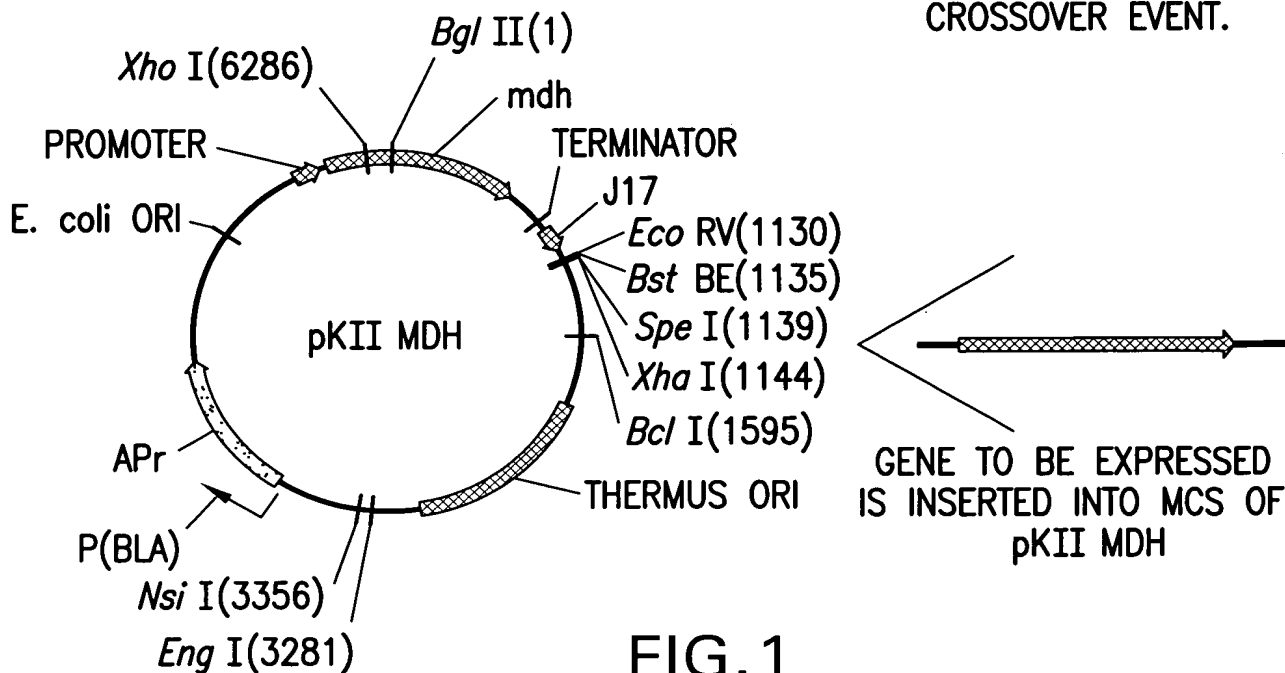
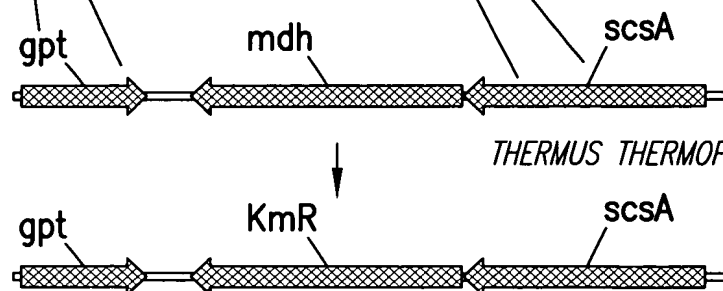
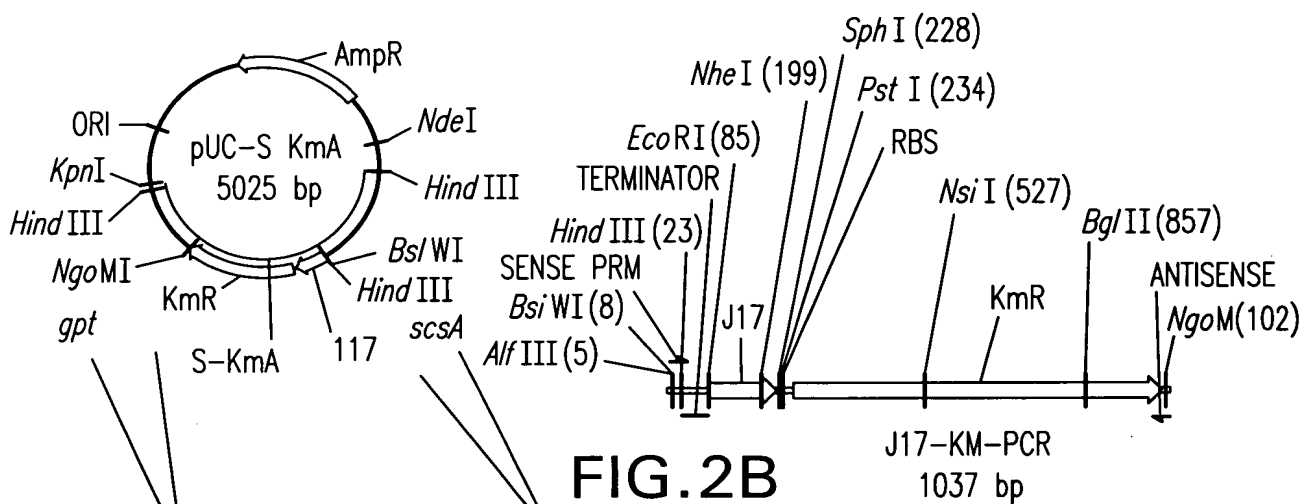
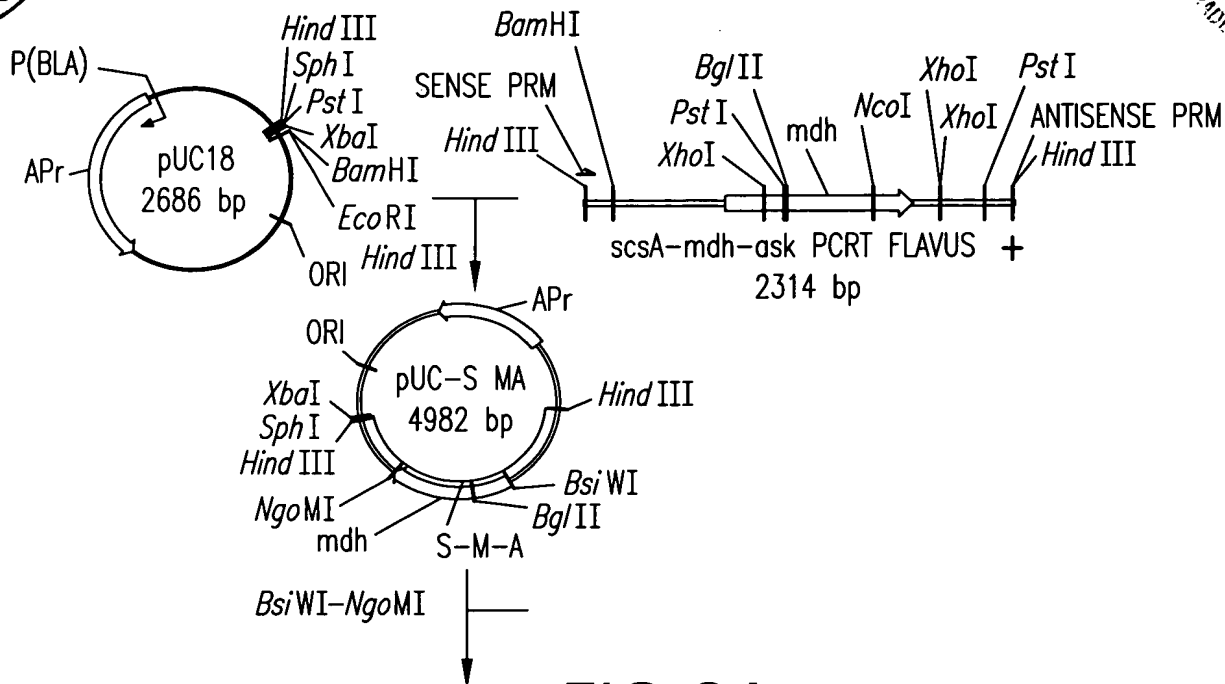
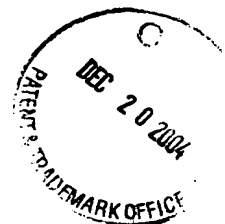
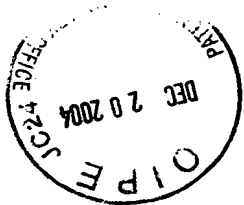


MDH IS DISRUPTED IN WILD TYPE AFTER TRANSFORMATION WITH pIGT-TMDH1. DOUBLE CROSSOVER EVENT.



GENE TO BE EXPRESSED IS INSERTED INTO MCS OF pKII MDH

FIG. 1



THERMUS THERMOPHILUS HB27 CHROMOSOME

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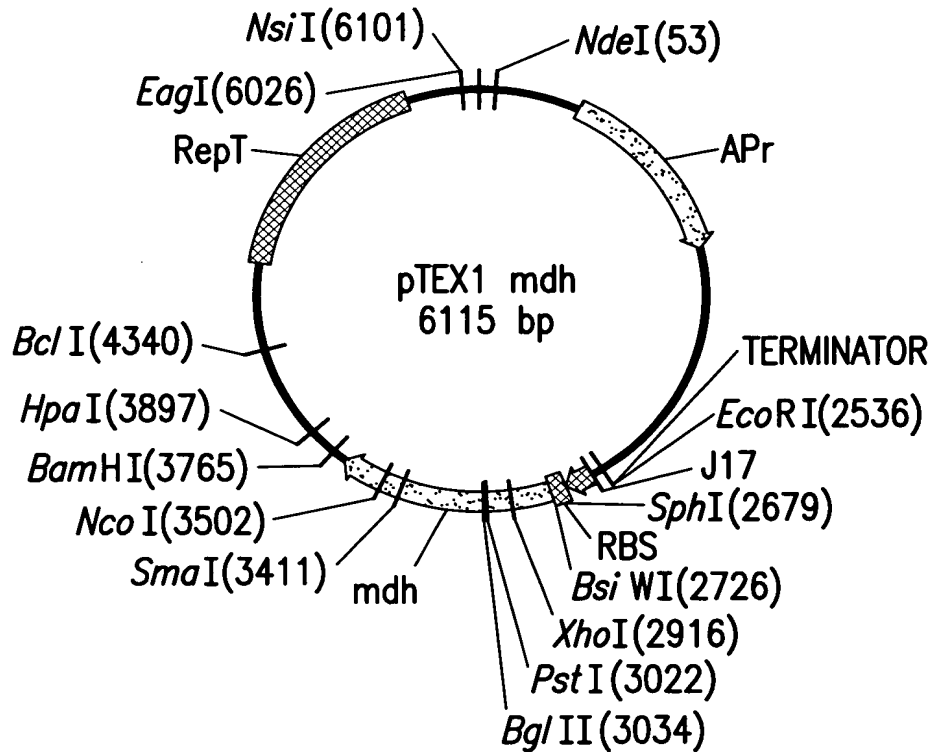


FIG.3A

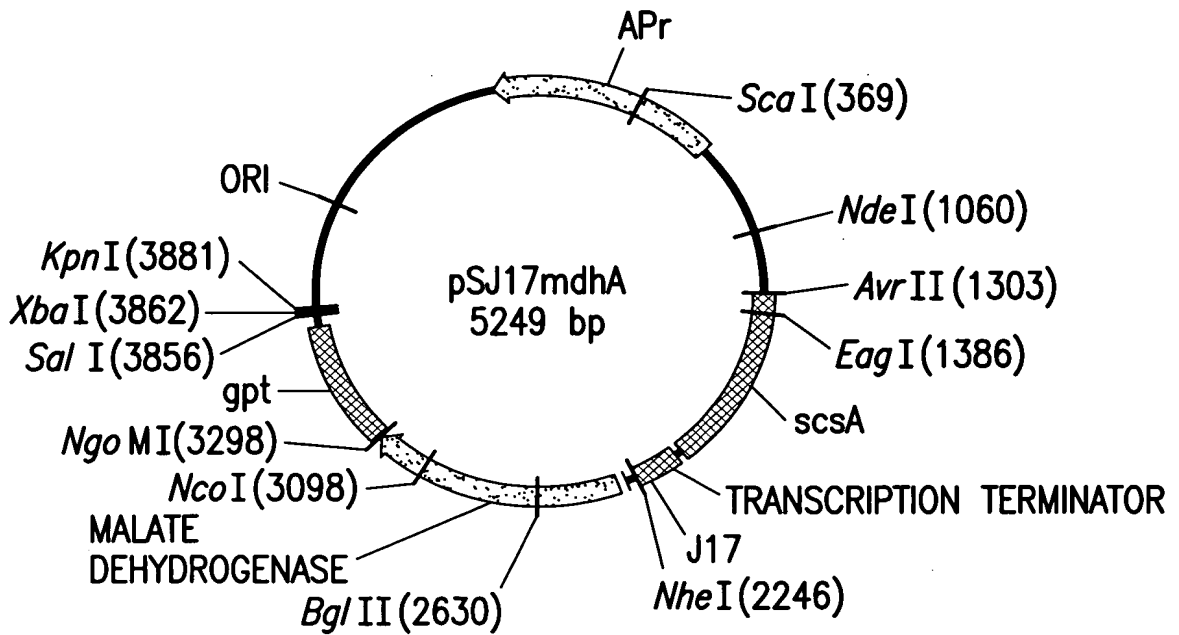


FIG.3B



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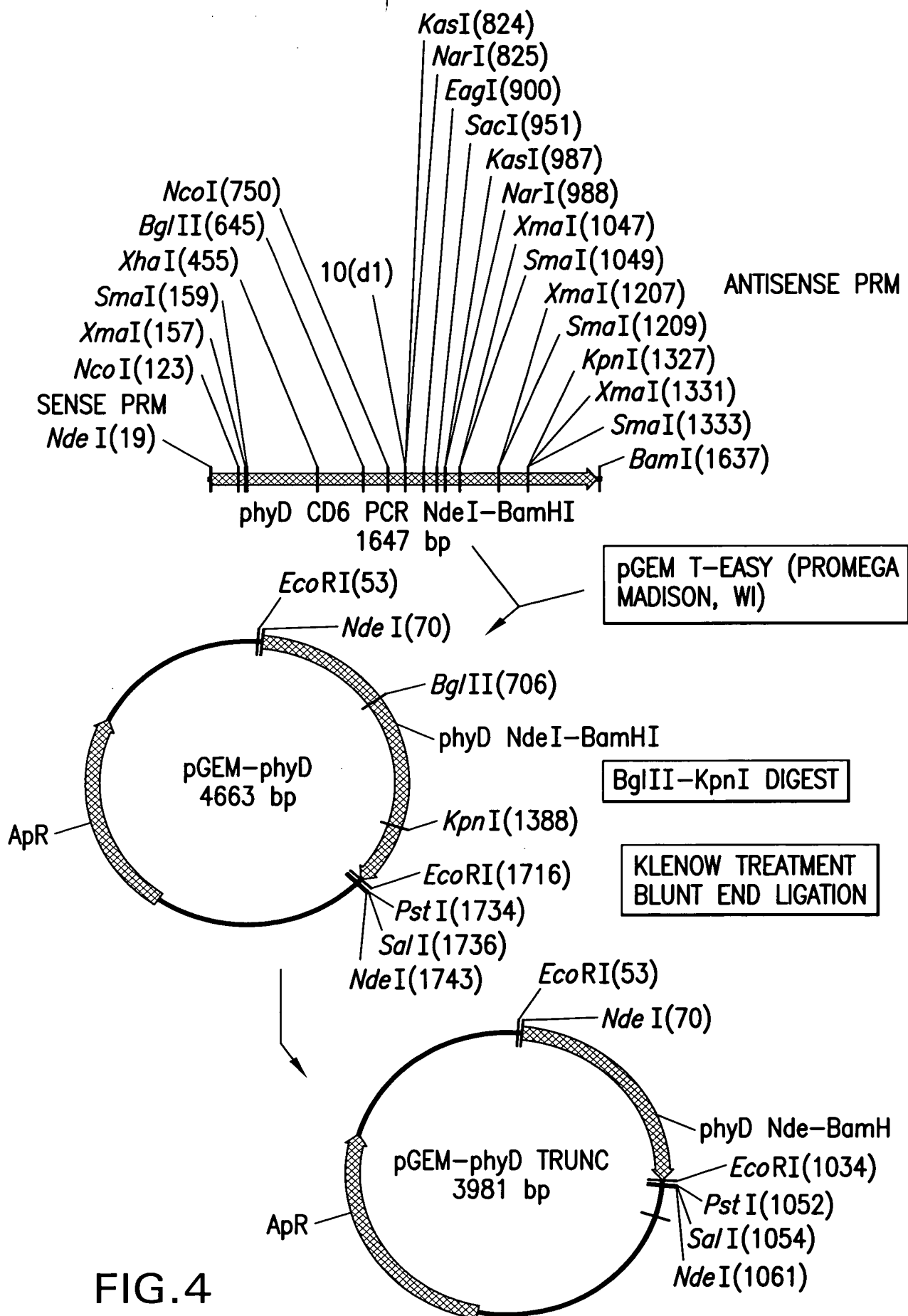


FIG.4

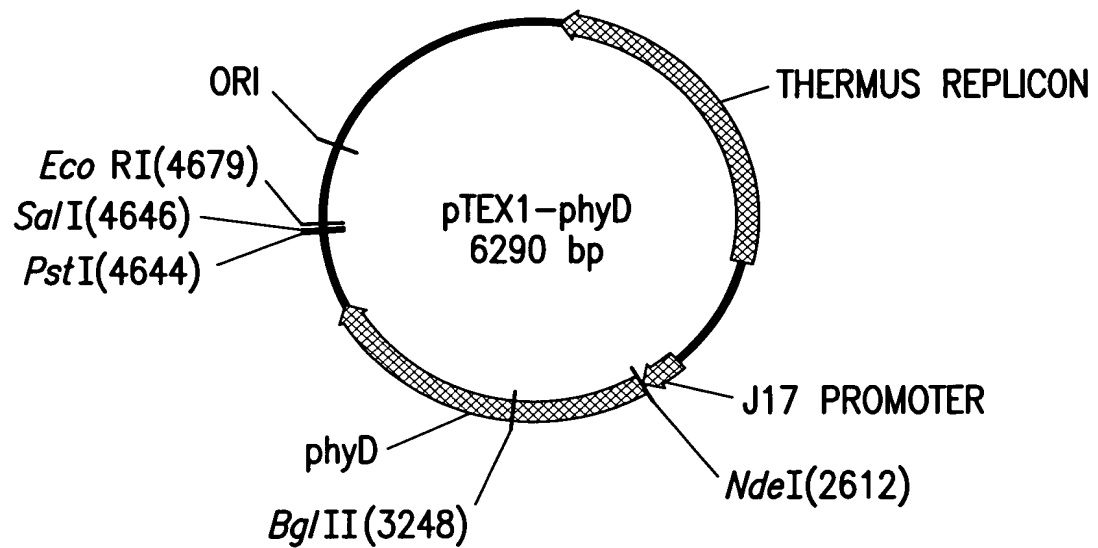
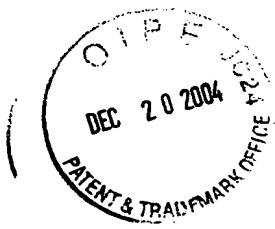


FIG.5

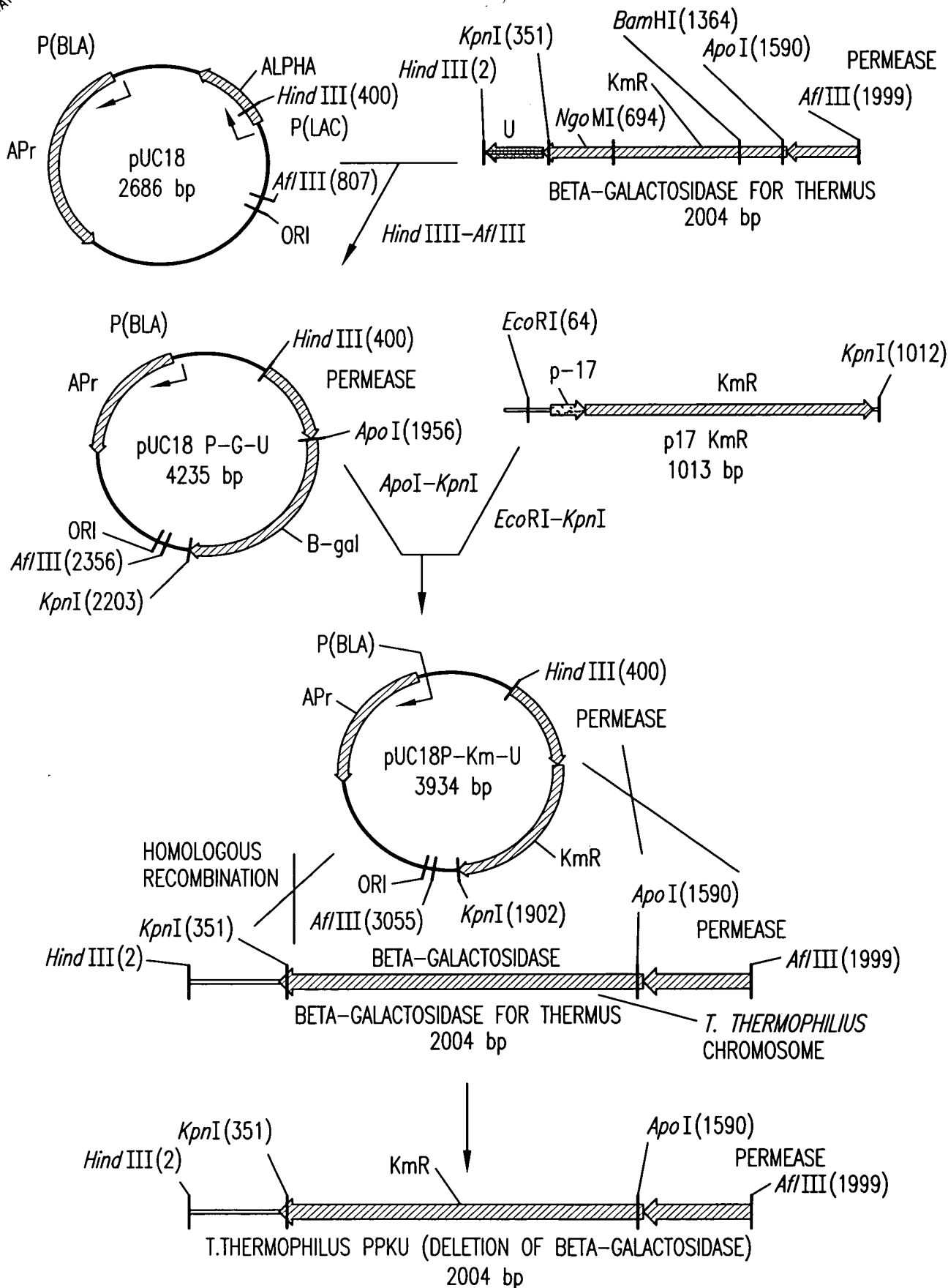
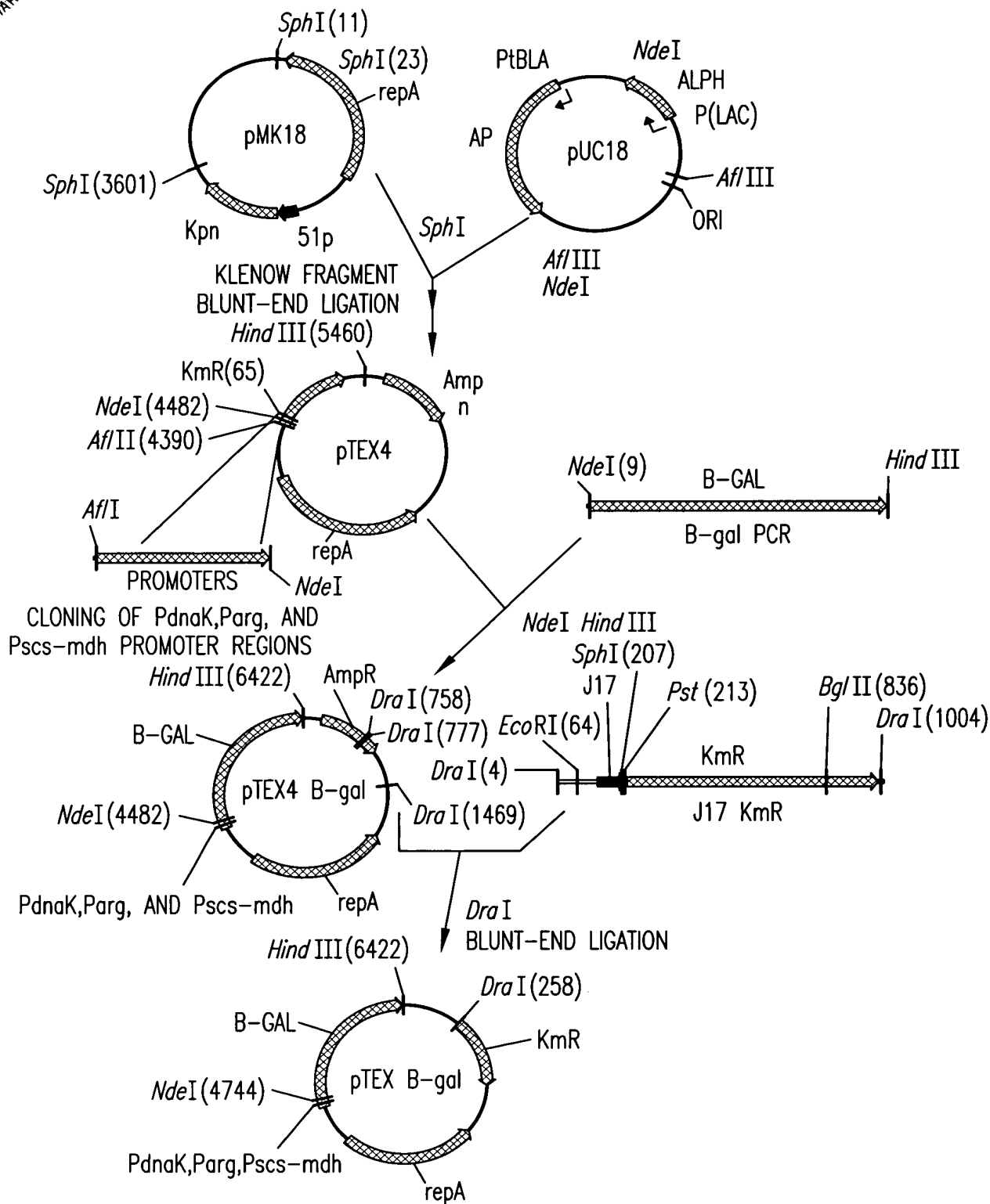


FIG. 6



pTEX7: dnaK HEAT SHOCK INDUCIBLE PROMOTER::  $\beta$ -gal  
 pTEX8: ARGININE INDUCIBLE PROMOTER::  $\beta$ -gal  
 pTEX9: scs-mdh CARBON-REGULATED PROMOTER:  $\beta$ -gal

FIG.7



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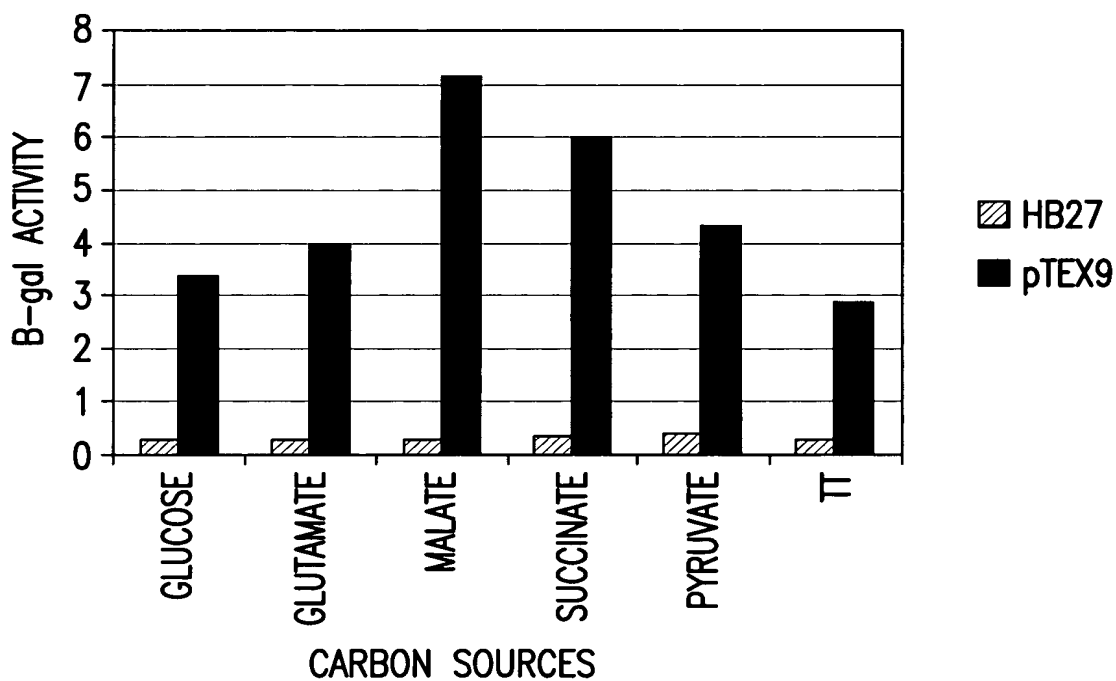


FIG.8



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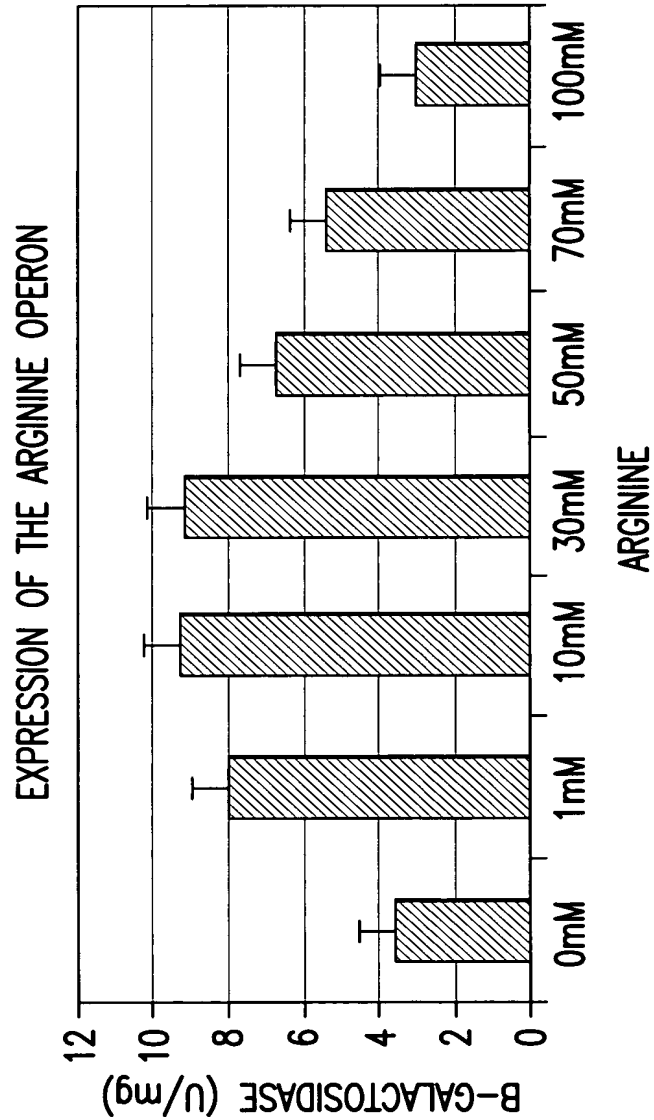


FIG.9